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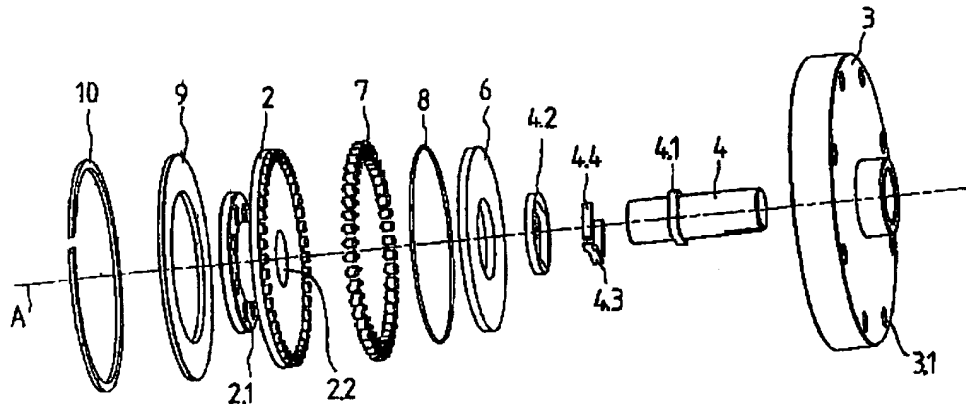
(81) Bestimmungsstaaten (*national*): AB, AG, AL, AM, AT,
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[Fortsetzung auf der nächsten Seite]

(54) Title: DISPLACING DEVICE

(54) Bezeichnung: VERSTELLVORRICHTUNG



(57) Abstract: The invention relates to a device for displacing two part (2, 3) relative to each other, except a displacing device which is provided for displacing a camshaft. The aim of the invention is to create a displacing device which is easy and smooth to operate, is self-locking, and ensures a largely backlash-free, continuous displacement of the two parts at a high degree of efficiency. Said aim is achieved by providing the displacing device with a first part (2) comprising webs (2.3, 22.3) which are spaced apart in the circumferential direction and between which chambers (2.4) are embodied, a second part (3) comprising an internal toothing (3.2, 13.2), and several teeth (7, 27) that are disposed at a distance from each other in the circumferential direction within the chambers (2.4) and have an inner contact area (7.4) for resting against an eccentric drive member (6) as well as an outer contact area (7.5) for engagement with the interior toothing (3.2, 13.2). Rotary movements can be performed by the teeth (7, 27) located within the chambers (2.4) about axes of rotation that run parallel to the axis of rotation (A) of the parts (2, 3) when an input shaft (4) is rotated.

(57) Zusammenfassung: Die Erfindung betrifft eine Verstellvorrichtung zum Verstellen zweier Bauteile (2, 3) relativ zueinander, ausgenommen eine in eine Nockenwellenverstellung vorgesehene Verstellvorrichtung. Um bei einfacher und leichtgängiger Bedienbarkeit eine Selbsthemmung und zumindest weitgehend spielfreie, stufenlose Verstellung der zwei Bauteile mit hohem Wirkungsgrad zu gewährleisten, weist die Verstellvorrichtung auf ein erstes Bauteil (2) mit in Umfangsrichtung beabstandeten Stegen (2.3, 22.3), zwischen denen Kammern (2.4) ausgebildet sind, ein zweites Bauteil (3) mit einer Innenverzahnung (3.2, 13.2), und mehrere Zähne

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**Veröffentlicht:**

— mit internationalem Recherchenbericht

Zur Erklärung der Zweibuchstaben-Codes und der anderen Abkürzungen wird auf die Erklärungen ("Guidance Notes on Codes and Abbreviations") am Anfang jeder regulären Ausgabe der PCT-Gazette verwiesen.

(7, 27), die in Umfangsrichtung zueinander beabstandet in den Kammern (2.4) angeordnet sind, jeweils eine innere Anlagefläche (7.4) zur Anlage an einem exzentrischen Antriebsglied (6) und eine äußere Anlagefläche (7.5) zum Eingriff in die Innenverzahnung (3.2, 13.2) aufweisen, wobei bei Drehung einer Eingangswelle (4) von den Zähnen (7, 27) in den Kammern (2.4) Drehbewegungen um zu der Drehachse (A) der Bauteile (2, 3) parallele Drehachsen durchführbar sind.

INTERNATIONAL SEARCH REPORT

PCT/EP 03/11082

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 F01L/352 F16H35/00 F16H25/06 F16D3/10 B60N2/225

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 F01L F16H F02M F02D B60N F16D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 643 128 A (KENNEDY OTHAR P) 1 July 1997 (1997-07-01) column 1, line 8-15 column 1, line 24-38 column 3, line 21 -column 5, line 20	1-7, 14-16, 18,19,21
A	EP 0 211 687 A (RINEFAS LTD) 25 February 1987 (1987-02-25) page 1, line 2-4 page 1, line 12-24 page 2, line 7-33 figures 1-5,9 --- -/-	1-7, 14-16, 18,19

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

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X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

Z document member of the same patent family

Date of the actual completion of the international search

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

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Citation of document, with indication, where appropriate, of the relevant passages

Relevant to claim No.

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